Appln. No. 10/612,392 Amd. dated August 11, 2005 Reply to Office Action of February 15, 2005

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1. (currently amended) Method for qualifying gemstones whereby gemstones are discerned from one another on the basis of their electrical conductivity, characterised in that at least a part of a gemstone (15,16,17) that is to be qualified is placed in the electrical stray field of a capacitor, whereby the electrical capacity of this capacitor is measured and compared to a reference capacity of this capacitor when a reference material (12) is placed in said electrical stray field, whereby said gemstone (15,16,17) is qualified as a gemstone with electrical conductivity when the measured capacity of said capacitor, which comprises when said part of the gemstone (15,16,17) is in said electrical stray field, is larger than said reference capacity.
- 2. (currently amended) Method according to claim 1, characterised in that, in order to measure said reference capacity, before said reference capacity is measured, a reference material (12) is used with a dielectric constant which is larger than that of the gemstone (15,16,17) to be qualified, and which is preferably at least equal to that of diamonds.
- 3. (currently amended) Method according to claim 1 or 2, characterised in that, in order to measure said reference capacity, before said reference capacity is measured, a

reference material (12) is used with a relative dielectric constant which is larger than 9.7.

- 4. (currently amended) Method according to <u>claim 1</u> any of claims 1 to 3, characterised in that, in order to measure said capacity, or said reference capacity, the gemstone (15,16,17) to be qualified, or said reference material (12), is placed in the electrical stray field (6) of said capacitor.
- 5. (currently amended) Method according to claim 1 any of claims 1 to 4, characterised in that, in order to measure said capacity, or said reference capacity, said part of the gemstone (15,16,17) to be qualified, or said reference material (12) respectively, is placed within the measuring range of a capacitive measuring probe (1).
- 6. (original) Method according to claim 5, characterised in that a measuring probe (1) is used comprising two concentric cylinders (2,3) made of an electrically conductive material, whereby the gemstone (15,16,17) to be qualified or said reference material (12) is placed in the electrical stray field (6) formed on the edges (4,5) of said cylinders (2,3).
- 7. (original) Method according to claim 5, characterised in that a measuring probe (1) is used comprising two coaxial electrodes (2,3) with a polygonal section, whereby the gemstone (15,16,17) to be qualified, or said reference material (12), is placed in the electrical stray field (6) formed on the edges (4,5) of these electrodes (2,3).
- 8. (currently amended) Method according to <u>claim 1</u> any of claims 1 to 7, characterised in that said capacity is measured via at least one facet (11) of the gemstone (15,16,17) to be qualified.
- 9. (currently amended) Method according to claim 1 any of claims 1 to 8, characterised in that said gemstone

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- (15,16,17) to be qualified is electrically insulated in relation to electrodes (2,3) of said capacitor.
- 10. (currently amended) Method according to <u>claim 1</u> any of claims 1 to 9, characterised in that said capacitor is provided with a shield in order to prevent its capacity from being influenced by electrically conductive parts of a jewel in which the gemstone (15,16,17) to be qualified is set.
- 11. (currently amended) Method according to <u>claim 1</u> any of claims 1 to 10, characterised in that diamond is used as said reference material (12).
- 12. (currently amended) Device for qualifying gemstones whereby gemstones are discerned from one another on the basis of their electrical conductivity, in particular a device for applying the method according to any of the preceding claims, characterised in that it whereby the device comprises a capacitor having an electrical stray field, whereby at least a part of a gemstone (15,16,17) to be qualified can be placed in the electrical stray field of this capacitor, whereby this device is further provided with a read-out unit (10) and a measurement converter (9) generating a signal as a function of the capacity of said capacitor when at least a part of the gemstone to be qualified is placed in the electrical stray field of the capacitor, whereby this signal is displayed via said read-out unit (10).

- 13. (currently amended) Device according to claim 12, characterised in that it is calibrated in relation to a reference capacity value which is at least equal to the capacity value of said capacitor when a material with a dielectric constant which is larger than that of diamonds is placed in the electrical stray field of this capacitor, whereby means are provided for generating a signal when the measured capacity for a gemstone (15,16,17) to be qualified, placed in said electrical stray field, is larger than said reference capacity value.
 - 14. (cancelled)
- 15. (currently amended) Device according to <u>claim 12 or</u>

 13 any of claims 12 to 14, characterised in that said capacitor comprises a capacitive measuring probe (1).
- 16. (currently amended) Device according to claim 12 or 13 any of claims 12 to 15, characterised in that an electrical isolator is provided between the gemstone (15,16,17) to be qualified and the electrodes (2,3) of said capacitor.
- 17. (currently amended) Device according to claim 12 or 13 any of claims 12 to 16, characterised in that said capacitor comprises a shield in order to prevent its capacity from being influenced by electrically conductive parts of a jewel in which the gemstone (15,16,17) to be qualified is set.